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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,134	07/31/2003	Hui-Chu Lin Lin	3304.2.75	2470

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MADSON & METCALF
GATEWAY TOWER WEST
SUITE 900
15 WEST SOUTH TEMPLE
SALT LAKE CITY, UT 84101

EXAMINER

FULLER, ERIC B

ART UNIT PAPER NUMBER

1762

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/631,134

Applicant(s)

LIN ET AL.

Examiner

Eric B. Fuller

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 8, 2005 has been entered.

Response to Arguments

Applicant argues that gas must be removed from the deposition chamber in order for the specified gas to read on diluting or reducing the concentration of the contaminants and alleges that the present invention is allowable over the prior art in view of this. This is not found convincing. The prior art explicitly teaches adding a gas to the deposition chamber. Even if no gas is removed from the chamber, the number of moles of gas in the chamber is increased while the number of moles of contaminant is kept the same. This reads on diluting. Applicant's claims have been amended such that some of the rejections of the first Office Action are again applicable. Therefore, the examiner has reinstated those rejections over the rejections of the previous Office Action in those instances where the first rejection has been deemed more proper.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-10 and 16 are rejected under 35 U.S.C. 102(3) as being anticipated by Ameen et al. (US 6,635,569).

Ameen teaches the process as claimed at column 5, lines 1-30, column 9, lines 1-34, and column 10, lines 55-60, wherein the chamber is cleaned with NF_3 , a plasma of Ar and H_2 is used to remove contaminants and stabilize the temperature of the showerhead for 1-10 minutes, a pre-coat of Ti is deposited on the reaction chamber without a substrate in the chamber. After the pre-deposition step, the Ti film is subjected to a stabilization process (50), which includes introduction of nitrogen and hydrogen gas in the chamber.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. (US 5,824,375) in view of Wakabayashi et al. (US 2003/0165620 A1).

Gupta teaches the process as claimed in column 8, line 37 to column 9, line 60, wherein the chamber is cleaned with NF_3 , a plasma of He and Ar is introduced into the chamber which stabilizes and removes contaminants, and a pre-coat silica film is deposited on the reactor without a substrate therein. The reference is silent to introducing a diluting gas into the deposition chamber after the pre-coat film has been deposited. However, Wakabayashi teaches that it is conventionally known to flow inert gases such as molecular nitrogen after pre-coating in order to stabilize the temperature distribution of the chamber. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize an inert gas in the process taught by Gupta. By doing so, the temperature in the process chamber is stabilized.

As to the dependent claims, to use other inert gases would have been equally obvious, with the expectation of achieving similar results. Additionally, feeding inert gases into the chamber inherently dilutes contaminants, thus reading on stabilizing the contaminate concentration.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Fuller whose telephone number is (571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

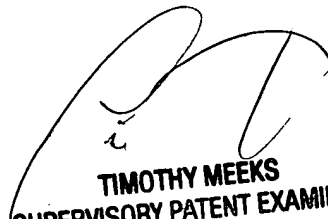
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks, can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EBF



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER